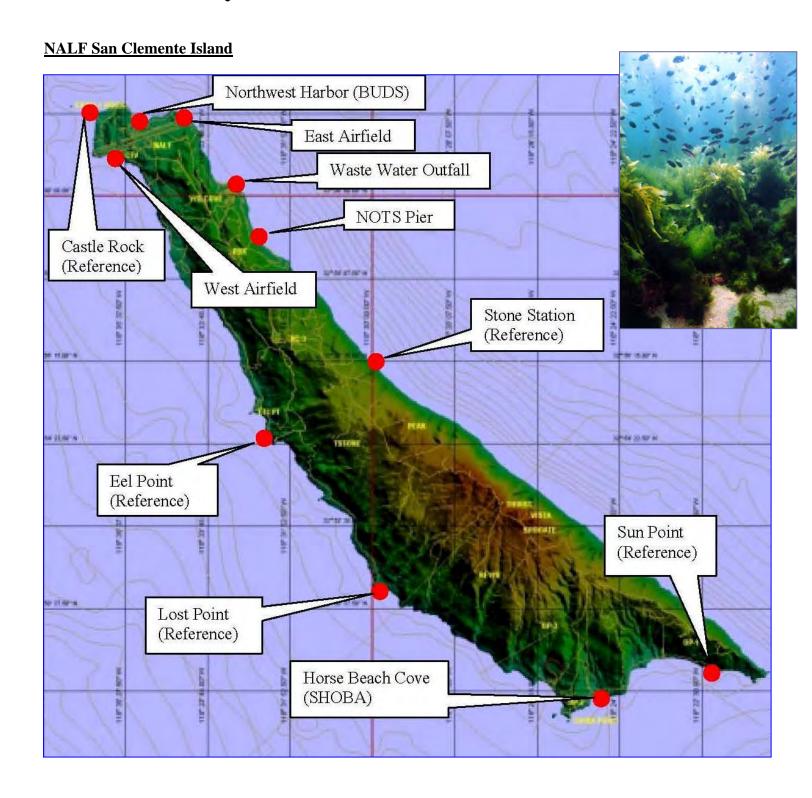
# Marine Monitoring at NALF San Clemente and OLF San Nicolas Islands



## **Kelp Forest Monitoring**

The Navy entered into a cooperative Agreement with the Channel Islands National Park in 2001 to conduct Kelp Forest Monitoring (KFM) at four locations on the Island. Each location represents a distinct eco-region of the Island. Surveys have been conducted in 2002-4 and 2008. KFM is identified as a high priority in the Integrated Natural Resources Monitoring Plan (INRMP) for the Island and will occur every 3 years at a minimum.



## Areas of Special Biological Significance (ASBS) Monitoring

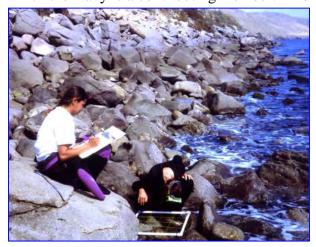


In 2006, the Navy established 11 intertidal/subtidal monitoring locations to support the exception for discharging into Area of Special Biological Significance. These sites are co-located the KFM sites as well as locations of special interest such as ephemeral stream discharge points. These sites are intended to be included in the Islands overall intertidal/subtidal monitoring program as recommended in the Island's INRMP.

#### **Rocky Intertidal Monitoring**

Funding has been provided and contracts have been awarded to establish four rocky intertidal monitoring locations on the Island. This monitoring effort is conducted in concert with the Multi-Agency Rocky Intertidal network (MARINe) Rocky Intertidal Monitoring Program of which the Navy is a contributing member. The

surveys will be using the CORE monitoring methods established by MARINe. These sites will be co-located with the KFM sites in each eco-region of the Island and will use information collected from the ASBS sites to determine final locations. The initaition of these sites will complete the Islands overall nearshore marine resources monitoring program and will support reporting requirements for ASBS, discharge and MLPA monitoring requirements. The information will also be applied to NEPA and other Navy decision documents for Operations, Training and in-water construction. Rocky intertidal monitoring is identified as a high priority in the INRMP



## **Black and White Abalone Surveys and Monitoring**

The Navy along with NOAA conducted white abalone surveys along the windward (west) side of the Island in 2004. The survey was conducted using mulibeam and sidescan sonar for determining bathymetry and potential habitat. ROV's where used to survey for white abalone. In 2008, the Navy conducted an Island-wide black abalone survey covering 62 locations and approximately 25% of the potential habitat on the Island. The survey discovered 10 black abalone ranging from 100mm to 130mm in size. No recruitment was observed. White and black abalone surveys and monitoring is identified as a high priority in the INRMP





SCI Black Abalone 1989

SCI Black Abalone 2008

#### **Bight 08 Monitoring**

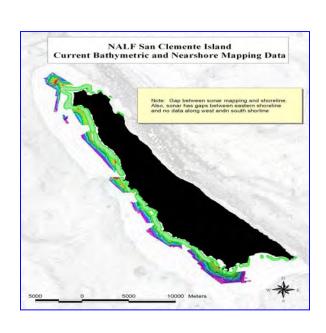
The Bight'08 regional monitoring study is coordinating its Cooperative Research Assessment of Near-shore Ecosystems (CRANE) and Partnership for Interdisciplinary Study of Coastal Oceans (PISCO) Rocky Intertidal efforts with existing monitoring programs at San Clemente Island. The CRANE sampling was conducted this past winter with the PISCO effort coming up this fall.

#### **Eelgrass Surveys and Mapping**

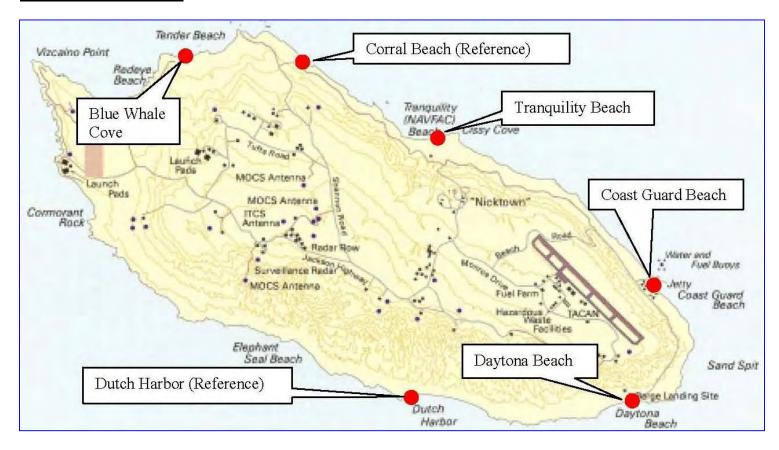
The Navy started mapping eelgrass on the Island in 1994. Along with researchers from UC Santa Barbara, the Navy continues to map the leeward side of the Island as funding permits. Eelgrass surveys and monitoring is identified as a high priority in the INRMP.

#### **Seafloor Substrate Mapping**

To identify potential abalone habitat, eelgrass locations and fisheries habitat, the navy began mapping the substrate in 1994. Areas mapped are site specific but include intertidal, subtidal and near shore out to -200 feet MLLW.



## **OLF San Nicolas Island**



## Areas of Special Biological Significance (ASBS) Monitoring

In 2006, the Navy established 6 intertidal/subtidal monitoring locations to support the exception for discharging into Area of Special Biological Significance. These sites are co-located some of the sea otter intertidal sites as well as locations of special interest such as ephemeral stream discharge points. These sites are intended to be included in the Islands overall intertidal/subtidal monitoring program as recommended in the Island's INRMP.



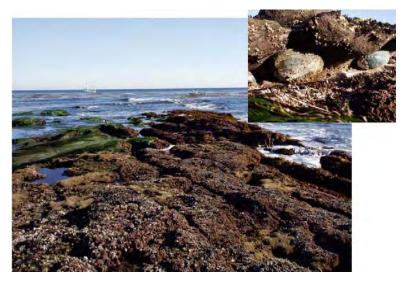
#### **Kelp Forest Monitoring**



The Navy plans to begin Kelp Forest Monitoring (KFM) at four locations on the Island. Each location represents a distinct ecoregion of the Island. Surveys will begin in 2009/10. KFM is identified as a high priority in the Integrated Natural Resources Monitoring Plan (INRMP) for the Island and will occur every 3 years at a minimum.

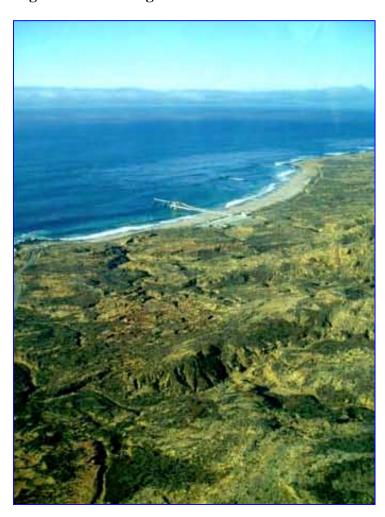
## **Rocky Intertidal Monitoring**

Funding will be provided to establish four rocky intertidal monitoring locations on the Island. This monitoring effort is conducted in concert with the Multi-Agency Rocky Intertidal network (MARINe) Rocky Intertidal Monitoring Program of which the Navy is a contributing member. The surveys will be using the CORE monitoring methods established by MARINe. These sites will be co-located with the KFM sites in each eco-region of the Island and will use information collected from the ASBS sites to determine final locations. The initiation of these sites will complete the Islands overall near-shore marine resources monitoring program and will support reporting requirements for ASBS, discharge and MLPA monitoring requirements. The



information will also be applied to NEPA and other Navy decision documents for Operations, Training and inwater construction. Rocky intertidal monitoring is identified as a high priority in the INRMP

## **Bight 08 Monitoring**



The Bight'08 regional monitoring study is coordinating its Cooperative Research Assessment of Near-shore Ecosystems (CRANE) and Partnership for Interdisciplinary Study of Coastal Oceans (PISCO) Rocky Intertidal efforts with existing monitoring programs at San Clemente Island. The CRANE and PISCO sampling was conducted this past winter.